

Work Order ID 62666

Thursday, October 07, 2010 8:07:04 AM



Page 1

Item ID: D2947

Accept



Setup Start



Revision ID:

Stop



Item Name: Clamp

Start Date: 10/6/2010 Start Qty: 100.00



Cust Item ID:

Required Date: 10/15/2010 Req'd Qty: 100.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 10-10-07

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2947	Rev A1								

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 12710 ☐ E-mail or Ship DXF file to vendor ☐ Laser cut flat pattern as per Dwg D2947 ☐ Possible supplier: GFI ☐ Material release note is required.

CZ 10/10/07 (100)

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

P. 10/10/06 (100)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

8/10/10/26

counts
(100)

25019

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 62666

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Page 2

Item ID: D2947

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Item Name: Clamp

Start Date: 10/6/2010 Start Qty: 100.00



Cust Item ID:

Required Date: 10/15/2010 Req'd Qty: 100.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 	Small Fab	0.00							
Small Fab	Memo	0.00							
Small Fab	1- Deburr any rough edges								
140 	Small Fab	0.00							
Small Fab	Memo	0.00							
Small Fab	TUMBLE								
150 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control	AS PER QSP019								

n/n

10/10/26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 62666

Thursday, October 07, 2010 8:07:04 AM

Page 3

Item ID: D2947

Accept

Revision ID:

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Start Date: 10/6/2010 Start Qty: 100.00

Required Date: 10/15/2010 Req'd Qty: 100.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location <u>457</u>	0.00							
Packaging									
Packaging	Memo	0.00							
170	QC21- Final Inspection - Work Order Release	0.00							
QC									
Quality Control	Memo	0.00							

MF
10-10-2010

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, October 07, 2010 8:07:08 AM

Page 1

Work Order ID: 62666



Parent Item: D2947



Parent Item Name: Clamp

Start Date: 10/6/2010

Required Date: 10/15/2010



Start Qty: 100.00

Required Qty: 100.00

Comments:

IPP: A□00.01.14□New issue□EC□

IPP Rev:B No longer made in house 07-06-11 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2947B  Clamp		Purchased	No			100	Each	0.0000	1 	105.2632		<i>C. J. / 26</i> (100)	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

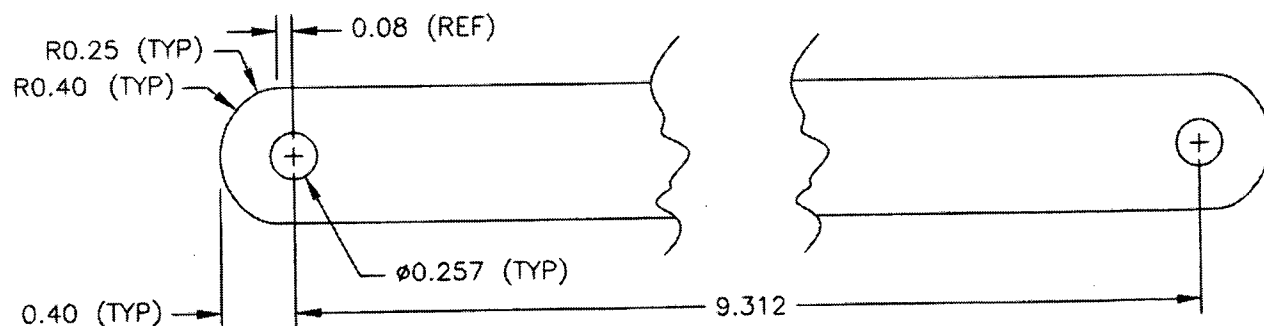
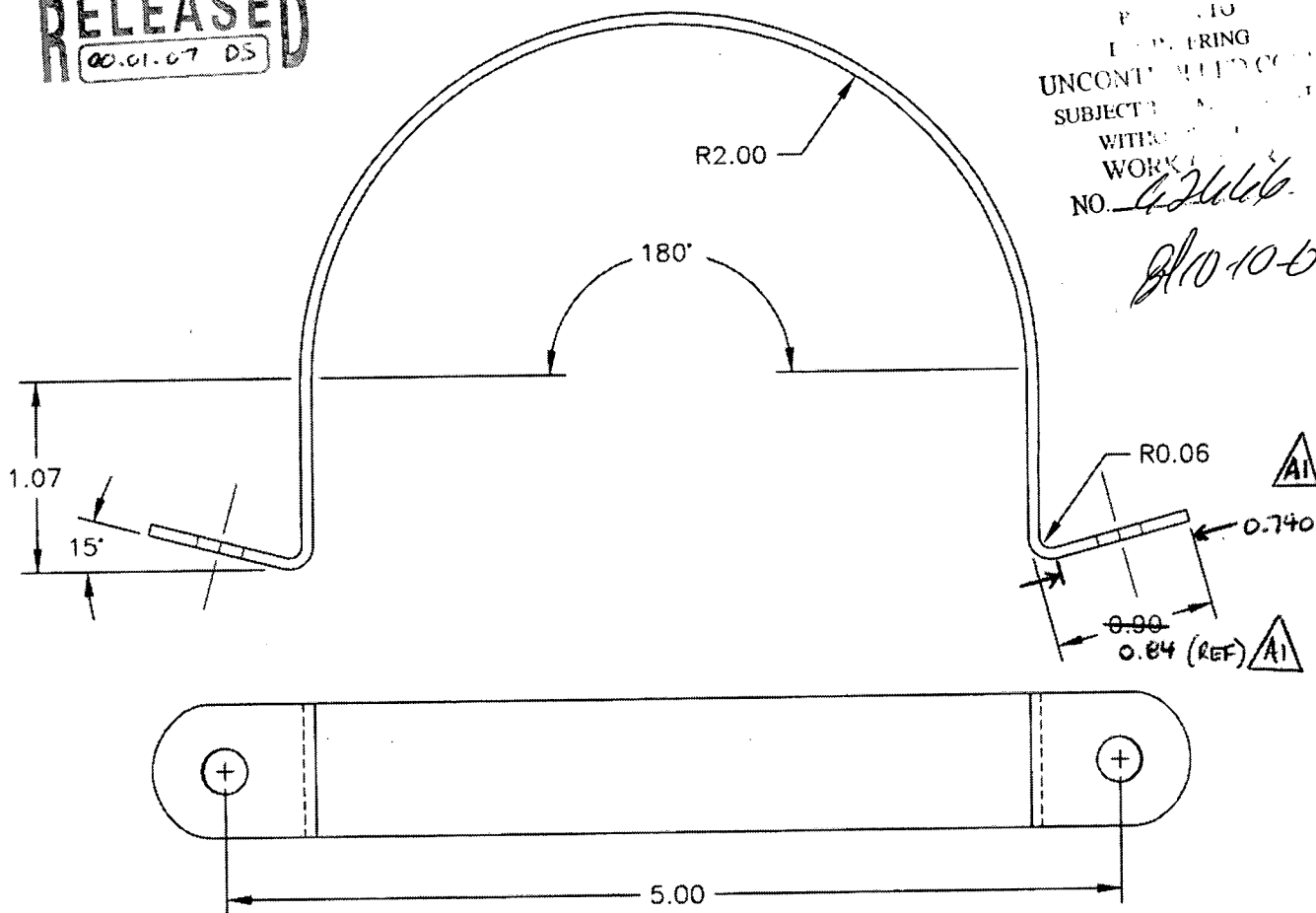
DART



DESIGN <i>[Signature]</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2947	REV. A SHEET 1 OF 1
DATE 00.01.06		TITLE CLAMP	SCALE 1:1
A	00.01.06	NEW ISSUE	

RELEASED
00.01.07 DS

SI
P
I
UNCONTROLLED COPY
SUBJECT
WITH
WORK
NO. *2266*
8/10-10-15



D2947 FLAT PATTERN

MATERIAL: AISI 304/316 SS 0.063 THICK x 0.75 WIDE
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES

01.09.07 ADD 0.740 DIMENSION; 0.84 WMS 0.90
A1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET
ANNEALED
2B FINISH

SPECIFICATION: MIL-S-5059
OR AMS 5513 (304)
OR AMS 5524 (316)
OR ASTM A240
OR ASME SA240

PART NUMBER: M304S TT GA
GA

WHERE "TT" = GAUGE THICKNESS

EG. 16 GAUGE SS SHEET = M304S16GA

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176

REFERENCE ONLY

RELEASED
09/08/23/14

B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZN D8-1), ADD GAUGE REF (C8-1), REF PAR 08-020A	CP	09.06.01
A	NEW ISSUE	DS	01.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.06.01		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. M304S	REV. B
TITLE 304/316 SS SHEET	SHEET 1 OF 1
	SCALE NTS
COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO12710

Purchase Order Date 10/07/10

PO Print Date 10/07/10

Page Number 1 of 1

Order From :

VC-GFI001

GFI
180 AVENUE LABROSSE
POINTE CLAIRE, QC H9R 1A1
CA

Contact Name

Vendor Phone 514 630 4877

Vendor Fax 514 630 4849

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FIXED
C/L 10/10/10

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2947B	Clamp	10/29/10 Yes	100.00 Each	Purolator ground	\$9.6500	\$965.00

Special Inst: AS PER DWG D2947 REV. A
B62666

PO Total:

\$965.00

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

CERTIFICATE OF CONFORMITY
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 10/07/10

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable



180 AVENUE LABROSSE
POINTE-CLAIRE, QC, CANADA H9R 1A1
TÉL.:(514) 630-4877 - FAX:(514) 630-4849

GFI est une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.



BON DE LIVRAISON / SHIPPING MEMO

DATE DE LIVRAISON / SHIPPING DATE			N° DE BON DE LIVRAISON / SHIPPING MEMO NO.		PAGE
JR - DY	MO - MO	AN - YR			
22	10	10	0448449		1/1



VENDU À / SOLD TO

EXPÉDIÉ À / SHIP TO

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON
K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON
K6A 1K7

CODE DE CLIENT / CUSTOMER CODE		N° DE CONTRAT / JOB NO.	VOTRE N° DE COMMANDE / YOUR PURCHASE ORDER NO.	EXPÉDIÉ PAR / SHIP VIA
DART GFI-0299		0221354	PO12710	

QUANTITÉ / QUANTITY	N° DE PIÈCE / PART NO.	DESCRIPTION
---------------------	------------------------	-------------

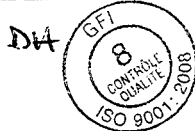
100 D2947B

CLAMP

CERTIFICATE OF CONFORMANCE REQ

8
10/10/76

MFG. JOB# J0221354 - 001 QTY 100



EXPÉDITEUR / SHIPPER

N° DE BON DE LIVRAISON / SHIPPING MEMO NO.



REÇU PAR / RECEIVED BY

DATE

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION.
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS.

**CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE**



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

Go 10/10/20

CERTIFICATE NO. <u>13</u>		OUR JOB NO. <u>J0221354</u>		SHIPPING MEMO <u>0448449</u>		
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
	<u>100 PCS</u>	<u>PO12710</u>	<u>D2947B</u>	<u>A</u>	<u>CLAMP</u>	<u>A</u>
MATERIAL		SUPPLIED BY		MAT. REL. NO.		
<u>SST 304</u>		<u>TW METALS / NORTH AMERICAN</u>		<u>H/N# 4WN7</u>		

	PROCESS	PROCESSOR	RELEASE NOTE #
1	<u>FIRST ARTICLE INSPECTION REPORT ON FILE</u>	<u>GFI</u>	<u>N/A</u>
2	<u>REF. GFI MANUFACTURING JOB NUMBER J0221354-001 (100 PCS)</u>		
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 22 OCTOBER 2010

G.F.I. Q.C. REP. *[Signature]*



**DP12-001 REV 0 Bombardier Certificate of Compliance
TW Metals District Procedure**

Revision: 0

Revision Date: 04-03-00

Superseding: Initial

Page: 1 of 1

CERTIFICATE OF COMPLIANCE**FRAUD AND FALSIFICATION STATEMENT**

The recording of false, fictitious, or fraudulent statements or entries on this document may be punished as a felony under federal statutes including federal law. Title 18 chapter 47.

CERTIFICATE OF COMPLIANCE

This certificate of compliance certifies that the material supplied on the purchase order number below complies in all respects with the material description and procurement specifications.

MERCURY FREE STATEMENT

We certify that mercury, radium, or alpha bearing instruments and / or equipment which might cause contamination have not been used in the manufacture, fabrication, assembly or testing of any material supplied by TW Metals Inc. Switches, glass thermometers, standard cell and other items containing the above elements may be used, but they will be located so as not to constitute a contamination hazard.

CUSTOMER NAME: GFI, IncPURCHASE ORDER No. 0076369ITEM No. 0001SHIPPER INVOICE No. 03256240MATERIAL: 304- s/s SheetSPECIFICATION: -MANUFACTURING MILL: North American StainlessSIZE: 0625HEAT / LOT No. 4WN7PART No. TS06348X96A4QUANTITY: 2 pcsTEST DEPARTMENT CLERK Janice Clark

AUTHORITY

Joe Schab
Director of Quality Assurance

S. 10/10/26



**NORTH AMERICAN
STAINLESS**

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 449204 01

Customer: 0470 002

Mail To:
PENN STAINLESS PRODUCTS INC.
P.O. BOX 9001
190 KELLY ROAD
QUAKERTOWN, PA 18951-9001

Ship To:
PENN STAINLESS PRODUCTS INC.
190 KELLY ROAD
QUAKERTOWN, PA 18951-9001

Date: 2/02/2009 Page: 1

Steel: 304

Finish: 2B

Your Order: 140349

NAS Order: AN 0411727 01

Corrosion: ASTM A162/A242, 1800and-OK

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED; UNS 30400
ASTM A240/08, A480/08a, A666/03; ASME SA240/07, SA480/07, SA666/07
CHEM ONLY ON FOLLOWING ASTM: A276/06a, A479/01, A484/06b, A312/07
CHEM ONLY ON FOLLOWING ASME: SA312/07, SA479/07
AMS 5513H EXXK; MIL-S-5059D AMEND3 (X CROWN MEAS)
NACE HRD175/01, HRD103/07; Q98766D-A X MAG FERR
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
EN 10204:2004 3.1; Q98763F Cond A; RoHS Compliant
Material is Free of Radioactive Contamination
NAS Steel Making Process: EAF, AOD, & Cont. Casting
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001:2000
Made & Manufactured in the USA; Mat'l is DPAAs Compliant

8
10/0/26

Product ID #	Coil #	Thickness	Width	Weight	Length	Mark	Pieces
034WN7 A	034WN7 A	.0595	48.0000	29.060	COIL	2925.9	11

CHEMICAL ANALYSIS

HEAT	CM	C	CO	CR	CU	MN	MO	N	NI	P
4WN7	US	.0500	.1825	18.3895	.5550	1.7575	.2970	.0670	8.1365	.0315
		S	SI							
		.0014	.2875							

MECHANICAL PROPERTIES

Product ID #	Coil #	UTS KSI	.2% YS KSI	ELONG %-2"	Hard RB	Tail Hard	A 262 Pr 2
034WN7 A	034WN7	99.35	54.27	44.59	89.00	84.00	OK

TW METALS

TEST

FEB 23 2009

ACCEPTED BY

NAS hereby certifies that the analysis on this certification is correct and the material meets the specifications stated.

QC ENGINEER

ERIC HESS

2/02/2009

Certificate of Mill Test Results
Pg 1/1
SO QTN-866065-001
19FEB09

/ROSEMARY

PO/Rd M49208225

PENN STAINLESS PRODUCTS, INC.

SHEET 304 ANS STL
16GA 2B FINISH X 48.0000" X 120.0000" L/S
PART NO.